MUSICAL VIBRATIONS FOR THE DEAF

By SARAH HARVEY PORTER

Instructor of the Normal Class, Gallaudet College, Washington, D. C.

[*Reprinted from the American Annals of the Deaf.*]

NEW YORK

Printed by Pupils of the New York Institution for the Instruction of the Deaf.

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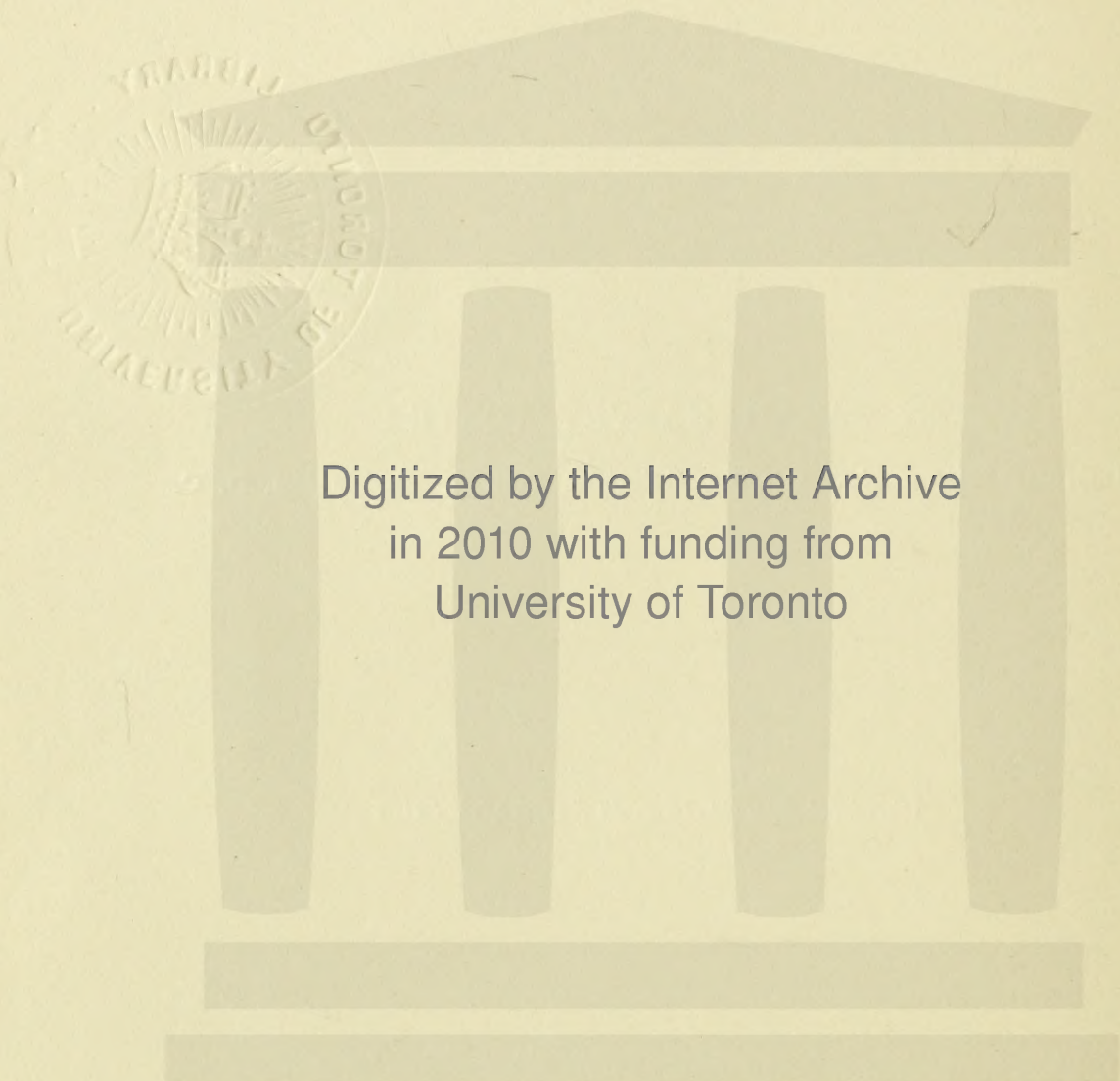

MUSICAL VIBRATIONS FOR THE DEAF.

From the American Annals of the Deaf.

"HEARING is an acquired faculty, deafness being the natural condition of the new-born infant. The auditory nerve assumes its natural function only after it has become medullated, and all hearing power, therefore, is largely a matter of education. The hearing power for speech depends not alone upon an intactness of the peripheral auditory organs, but it depends also, to great extent, upon the condition of the auditory centers in the brain and of the entire so-called cerebral zone of language."

G. HUDSON-MAKUEN, M. D.,
Philadelphia, Pa.

"In the education of to-day Rhythm holds no important place in the mind's curriculum. . . . While the Greeks may have made Rhythm an altogether too important element in the education of their youth, we, on the other hand, have erred in not appreciating the fact that all life, mental and physical, is perfect in proportion to the perfection of its Rhythm. *Brain activity is not made up of currents of force, but rather of Rhythm among the brain cells.* Lack of appreciation of the part that Rhythm plays in the processes of life has prevented child life, in the home and in the school, from rising to the heights it should have attained."

CHARLES H. SEARS,
Clark University.

Again teachers of the deaf may lead in a new educational movement of prime psychological importance. Articulation teachers have for some years claimed, with much reason probably, that brain development is stimulated by calling the organs of speech into play. In this year of grace, 1912, on the right bank of the Hudson, in the great, liberal State of New York, in

handsome, perfectly equipped buildings, surrounded by attractive and beautiful scenery, five hundred deaf boys and girls daily, and literally, "attune their lives to Rhythm."

In almost every class exercise in every schoolroom of the New York Institution for the Deaf, eye rhythm, ear rhythm, body rhythm, and motion rhythm are utilized as aids to instruction. Above all, use is made of musical rhythm. These children get up in the morning to the call of fife and drum; march to their meals and to school in perfect step and time, heads erect, eyes straight forward, clear and happy, to the rhythmic vibrations of as good a band as one is often privileged to hear, in spite of the astounding fact that every player is either partially or wholly deaf. When, as often happens, the school band is invited to participate in high-grade concerts given by hearing musicians in New York City, the smallest tot at Fanwood is proud of the honor; at the annual military drill (a sight worth going far to see) when each company is rigidly inspected by a Brevet-Major General and his staff, every young heart of the five hundred members of the school beats unevenly from anxiety and pride until the severe ordeal is over. Class spirit is rife but school spirit is stronger, for after the prizes are awarded heartburnings cease. Congratulations to the victors from the unsuccessful are as genuine as they are courteous. All rejoice (I make this assertion on the strength of confidential talks with the pupils directly after the drill last May) that the honor of the school has been sustained. In short, the individual upholds the State—not a bad annual lesson in democracy, that, for five hundred "little citizens," mostly of old-world parentage, who, boys and girls alike, will, perhaps, before many years, cast their votes for civic righteousness.

Each State school has its own paramount and peculiar problem to meet and grapple with. New York City's East Side is, largely, the problem of the Institution at Fanwood. Bred in flesh and bone and soul of these foreign children, by generations of monarchical traditions, is respect for a uniform as *the* symbol of external authority. It was, therefore, a stroke of genius for Mr. Currier to turn the Institution into a military school, the only military school for the deaf in the world, soon after his accession as Principal in 1893.

Even the most anti-militant among us, those of us who wish fervently that all guns, unloaded of course, might remain forever in peaceful academic precincts, even we must admit that a well-conducted military school makes on the whole for physical health, neatness, good manners, mental alertness, self-control, respect for law, grit, courage—and, above all, for the ruling faculty in education and in life—attention. The system at Fanwood includes merit promotions which, inciting ambition, make boys rule themselves largely. "Military repression" is a popular cant phrase. At Fanwood, at least, there is far less suppression of the individuality of each pupil than in the average large grammar school for the hearing. External slouchiness, unquestionably, does make for mental slouchiness. Paradoxically, self-control over the muscles frees the mind.

But Mr. Currier soon found that military evolutions without the accompaniment of vibratory rhythm lacked spirit. His all too modest account of the introduction of music into his school for the deaf is illuminating in many ways. The italics are mine. Mr. Currier writes :

In regard to the beginning of the musical vibratory training, about which you ask, *thirty-five or thirty-six years ago* I began to inquire why a deaf boy

should enjoy beating against a wall or any other solid with a club and, after inquiring of the individuals, learned that the resultant sensations gave pleasure and enlivened the body. From the varied testimony, I concluded it was a factor which could be used to advantage in stimulating the deaf to greater activity.

With the military organization, the solemn character of the various ceremonies without music led me to attempt the introduction of the drum. I found the marching and manual-of-arms improved very much *when we were hurling sound waves against the battalion. It was the evolution of the wall and the stick.*

One day, *noticing* a boy blowing into a hollow key and thus producing a shrill note, *it occurred to me* that, if that were possible, with instruction fifes might be added to the drums, and that we might have a complete drum and fife corps, with the added value of a different sound-producing instrument. After some little practice we developed a number of fifers who, with the drummers, gave us most satisfactory accompaniment to the military ceremonies.

The question of keyless bugles *was brought to my attention* by the performance of a band from Canada who were present at a military tournament in which our cadets were taking part. The tone evolved *seemed to me* to be of value in stimulating the deaf, and I secured the services of a bugler of one of the regiments of the National Guard to assist me in experimenting along these lines. I found that, *on placing the mouth of the bugle about eighteen inches from the shoulder blades of the pupils, it was possible to secure imitation of the tone and, by practice, to secure increased sensitiveness to sound-waves.* From the bugle I attempted the cornet with such success that we abandoned the bugle and used this latter instrument in its stead.

After some years, I determined that I would introduce the other instruments, in order to secure a more satisfactory production of various harmonious tones. The bandmaster said that would be impossible, as the deaf could never get the after beat. I *insisted*, however, that trial be made and, much to his surprise and my delight, I found that the deaf took as naturally to the after beat as though they were hearing. In fact, they did better than hearing pupils of the same experience, and age.

The band performs most satisfactorily to the listener, the phrasing and time being absolutely perfect. The pupils enjoy the music, and, as you will see from the chart, the various sensations about which you ask are gained. They want to practice, which is not generally the case with hearing children.

The recent use of harmonious waves by the medical profession in England for ameliorating the conditions imposed by paralysis strengthens me in the belief that the musical instruction is more important as an educational factor for the deaf child than it is for the hearing. I love music. It thrills me, and my experience with the deaf teaches me that they, too, love music, and that it thrills them. To the doubters of the philosophy of this procedure I have only to say, "Come and see," or rather, "Come and hear."

The field-music corps consists of six fifes, six drums, and a bass drum. In the band are sixteen pieces: five B-flat cornets, three E-flat alto horns, one B-flat tenor, one B-flat baritone, two E-flat basses, one trombone, one snare-drum, one pair of cymbals, and one bass drum. The repertoire, at present, includes 185 selections. The band-master, Mr. Michael Mehling, deserves the greatest credit for his excellent work, as does also Major William H. Van Tassell, in charge of the military evolutions. This band at Fanwood not only likes to practice, but its members often ask to be allowed to play out of regular season. Never on the drill ground does the band play without a large hearing audience leaning over the surrounding fences to listen, not because of the novelty of a deaf band but for the sake of the unquestionably good music.

"But many members of the band have some hearing" cry the critics. Well, what of that? So much the better, in fact, since the accompanying charts show that in nearly every case where, in the beginning, latent or already developed hearing existed, a decided increase in aural power has resulted from the musical practice, while the enjoyment of the totally deaf in the vibrations

produced by the musical instruments is great and geninue. During a week spent at Fanwood I talked much (wholly unhampered by the presence of officers or teachers) with many pupils of all grades on this subject. I had no theory of my own to try to substantiate. I sought the truth only, and no experienced teacher lives who does not know when children are saying what they think somebody else may *want* them to say, and when they are speaking from the heart. I am convinced that practically all the pupils of the New York school enjoy and profit educationally by the musical vibrations there used. If every member of that remarkable band had full hearing, its maintenance would still be well worth while because of its effect on the other pupils of the school without appreciable hearing. After all, perhaps the best lesson taught by wireless telegraphy and kindred seeming marvels is intellectual tolerance. The day may come, some of us believe it will come, when hearing brass bands may be employed in schools for the deaf.

It is high time that we teachers of the deaf should drop our apologetic attitude toward the public and our more than apologetic, our meaching attitude toward each other for harboring in our schools children who are not totally deaf.

"He can hear in one ear," might be, actually, a term of reproach, used, as it often seems to be used, to belittle the teacher's frequently herculean labors for such a child. The antithetical phrase, "Oh, his hearing does not help him any," is even more mischievous and misleading, for *if* even the slightest trace of hearing is not made by the policy of the school to "help" its possessor, then, in plain English, that school has no right to receive State funds. In view of the fact that every school for the deaf does, and must necessarily, include many

pupils who hear in varying degrees, the rise of this curious deprecatory pedagogical attitude becomes rather an interesting minor psychological problem. Possibly the pious benefactors who, in the early days, paid the bills, felt they were not getting their money's worth unless the objects of their bounty were all true to name—deaf and dumb.

Musicians, Fife and Drum Corps.	Amount of sound perception.	Age at becoming deaf.	Instrument.	Development in hearing and appreciation.	Feel difference between slow and fast music.	Part most sensitive to vibrations.	"How music makes me feel."
Thomas Danks	Very slight	Unknown	Fife	Improved in hearing	Yes	Chest	"Feel good in my body."
Charles Drake	None	Unknown	Drum-major, drum and fife.	Rapid	Can feel difference		"An exciting feel'g comes up from the floor."
Jacob Ebin	Very slight	7 years	Drum	Has improved and likes it.	Likes slow best	Chest	"Pleases me, makes me happy. Hear better."
Ernest Ette	Some	18 months	Fife	Yes	Slow best	Chest	"Feel Vibrations."
Samuel Glankner	Perceive loud sounds.	Born deaf	Bass drum	Did not like it well at first. Like it more and more.	Slow best	Ears and chest	"Feel happy."
Joe Gaffin	Slight	Unknown	Fife and cornet.	Not in hearing but in appreciating.	Likes fast best	Ears and body	"Mixed up when march without band. Lively and happy."
Milton Haberman	None	7 years	Drum	"Could hear nothing at first, now better."	Slow best	Head	"Feel pleased."
Max Hoffman	Very slight	Unknown	Fife	Hears better	Slow best	Head	"Pleases me."
Charles Phillips	None	1½ years	Drum	Hearing awakened.	Slow best	From floor through feet.	"Well."
Julius Rosenberg	Considerable	Unknown	Fife	Hears better and likes it.	Notes the difference.	Fingers	"Feel good."
Earl Shaler	Considerable	Unknown	Fife, Piano before becoming deaf.	Hears better and improved in appreciation.	"Fast makes me lively but confuses me when band plays."	Top of the head.	"Lively."
Charles Sussman	Slight	Unknown	Drum and cornet.	Not in hearing but in appreciating.	Slow best	Head and ears	"Feel movements in my chest and it makes me happy."
John Uhl	Some	Born deaf	Drum	Yes	Slow best	Lungs	"Music makes me lively."
Henry Busch	Considerable	5 years	Cornet	Very marked	Yes, like slow-music best.	Feet	"Inspires hope."
Herman Cammann	None	14 months	Basso, tenor	Improved very much.	Yes	From the feet up	"Fine."
Michael Ciavolino	Sounds but not speech.	Unknown	Cymbals, cornet.	Improved in hearing and in understanding music.	Yes	Feet	"Well."
Fidangue DeCastro	Very little	Born deaf	Cornet	Learned to like music since joining the band.	Likes slow best	Lungs	"At first made me feel dizzy, now makes me feel very well."

Rocco de Muccio...	Good	7 years.....	Cornet.....	Improved in hearing and in playing.	Likes slow best because it is very sweet and beautiful.	Ears and head..	"It enjoys me very much. I often think about it while sleeping. I am also a blind boy and without music would be lonesome."
Louis Dias.....	Some	3 years.....	Basso.....	Improving in hearing.	Feels sad with slow music.	Lungs	"Feel vibrations in my head."
Jacob Eberhardt...	Some when near and loud.	10 years.....	Cornet.....	Not in hearing but in appreciating music.	Yes	Chest	"Chest feels vibrations and becomes tired."
Louis Edwards....	Some	3½ years....	Alto	Improved in hearing and appreciating music.	Yes	Chest	"I appreciate it for it makes me improve."
Millard Green	Good	3 years.....	Baritone.....	Has improved in in hearing.	"Fast cheers me up but slow makes me lonesome."	Head.....	"Braces me up when I feel tired."
Leonard Kramer ..	Good	Baby.....	Drum, fife and Cornet.	Rapid.....	Very well.....	Head	"Improves me."
Charles Lambert...	Considerable....	6 months....	Cornet.....	Rapid improvement.	Likes slow best...	Head.....	"Livens me up when tired and cheers me up"
James Landon.....	Considerable....	6 years.....	Basso horn.....	Has improved in hearing and in appreciating vibrations.	Likes fast best....	Legs.....	"Makes me feel proud and anxious."
Isidor Levy.....	Very slight or none at all at first.	Born deaf...	Bass drum.....	Has developed in hearing and appreciation.	Likes slow best...	Legs.....	"Feel that I am all right."
Charles Olsen.....	Very slight	5 years.....	Drum.....	Has developed in hearing and appreciation.	Likes slow best...	Legs.....	"Good."
Joseph Schultz.....	None.....	Unknown...	Drum, Alto.....	Improved	Likes slow best...	Thro' the body..	"Good."
John Stafford.....	Considerable....	Born deaf...	First alto.....	Improved much.....	Likes slow best...	Chest	"It is not often that I have a headache when in the band. '
Nathan Schwartz..	Considerable....	3 years.....	Cornet.....	Nervous at first. Like it more and more.	Slow best	Through the whole body.	"More attentive to sounds now."
Edward Trinks....	Perceives loud sounds.	3 years.....	Solo B cornet...	Hearing improved and rapid develment.	Slow best	Thro' the body..	"Gives pleasure when I am weary."

Girls of One Class.	Age at becoming deaf.	Amount of sound perception.	Part of body most sensitive to vibrations.	"How music Makes me feel."
Susan Adcock	14 months	None	From the feet	Music makes me feel good.
Annie Bennett	3½ years	None	"I feel the thrill from my feet."	Music makes me feel both happy and sad. When the band plays I feel good.
Catherine Christgau	18 months	Some	Ears and head	Makes me feel happy. I love to dance when the music begins.
Annie Farliser	2 years	None	"Temples and legs."	Have practiced some on piano. Sometimes musie makes me feel sad.
Anna Frank	18 months	None	"I feel it from the floor."	It makes me very happy.
Elsie Grossman	6½ years	None	Ears and hands. Drum and piano played as a child	Can keep time in a dance with music. I love it, for it cheers me when sad.
Julia Heine	Born deaf	None	Feet	I cannot hear when the band plays but it makes me feel in my feet.
Lena Herschleifer	Born deaf	None	"Music thrills whole body."	The vibrations always make me so happy."
Anna Klaus	Born deaf	None.	Feet	I feel it through my whole body and at times it makes me pretty happy.
Carrie Lanz	8 years	None	"When I stand near the band it gives me a strong shock through the feet to the head."	Slow music makes me sad but quick, loud, and merry music happiness to me and gives me a great cheer.
Lucille Lefi	6 months	None	"Music rises through my feet when the band is near enough."	I never understand the sounds so do not care for it.
Wanda Makowski	7 years	Some	Feet	Always had a great desire for it. Makes me happy when I feel blue.
Delma Pearce	Born deaf	Slight	Ears and body	I always feel so good when the band comes near me.
Katie Ross	Born deaf	None	"Feel when near."	Music makes me feel so happy.
Ida Schulte	10 months	None	Body	Music makes me feel so happy.
Barbara Spoehrer	6 years	Considerable	"Ears and through feet so I can hardly keep still."	Am improved in hearing and mother thinks it is the music. When homesick or discouraged it makes me feel delighted.
Rose Steinlauf	3 yeare	Some	Head. Piano	Can hear but not tell selection,
Amelia Stenz	7 years	None	Head. Piano	It feels just as a sound going up to my head. It is only an inspiration, I know, but I do wish I could hear it.
Alice Tracy	9 years	Considerable	"Thrill all through my body."	Ofttimes I have a melancholy feeling—a feeling that I am good for nothing—but at the sound of music I forget all my cares and troubles.
Gladys Wren	Born deaf.	None	Body and chest	Happy.

It has been the glory of the New York Institution for ninety-three years that it has continuously, and well, given aural training an important place in its curriculum. Much was done under the Peets. Much has been accomplished in this direction by Mr. Currier, who, very early in his career, invented a most excellent hearing tube and who never fails to keep abreast with all modern acoustic science, trying in turn every new invention which claims to give aid in hearing. The band of to-day, about which so much talk is being made, is, after all, only the *present* apex of success in the school's aural endeavor. Had all other schools in the United States followed the example thus set by New York in aural training, many men and women, once pupils in schools for the deaf, would to-day be rejoicing that, in childhood, their precious remnant of hearing was not allowed to lapse into uselessness.

Just a word concerning some of the points I have italicized in Mr. Currier's letter. We see that there was no haste, no hue and cry of achievement for advertising purposes, as has sometimes been charged by persons too ignorant or too *lazy* to want to understand this important movement. "Thirty-five or thirty-six years ago" came the germ of the idea which is still developing in the brain of a sane, daring, energetic man with enthusiastic faith enough to remove mountains of difficulty and prejudice.

"I observed," "I noticed that," "It occurred to me," "I inquired,"—the phrases of the true scientist, these. The inception of this method was as simple as Watt's observation of the homely kettle and its puffing steam. It would seem as if any one of us might have thought of this possibility, but—we didn't.

Probably my own experience in failing utterly to realize what

harmonious musical vibrations might mean educationally to my deaf pupils is not isolated :

A few days after Christmas, more than a quarter of a century ago, I presented to a very bright boy, wholly and congenitally deaf, a trumpet gay with red, gilt, and green. The only little disadvantage of this rather costly toy was its stubborn refusal to perform the natural function of a trumpet—to emit sound. But this muteness, I assured the little hearing donor from whom I wheedled the gift, could make no possible difference to a deaf boy, while, I congratulated myself inwardly, it would make a decided and most comforting difference to the deaf child's teacher whose windows overlooked the play-ground.

Frank seized the trumpet joyfully, blew into it, looked puzzled and disappointed, made two further fruitless attempts ; then, exclaiming with distinctness which would have much gratified his articulation teacher, " No good ! Cheat !" threw the instrument over a fence with all the force his sturdy little arm could muster. Turning angrily, he flashed upon me from his black eyes a look of scorn, repeated the word " Cheat !" and walked away, as one who turns his back upon a betrayer. I was sorry, but—I was also blind and stupid.

Many year later, my adopted little daughter, visiting with me at the home of a relative of mine, would whisper to me each morning : " Do you think aunt Nellie will let me play the piano to-day ?"

Knowing that the child was totally deaf, I supposed that her very great pleasure in drumming on a piano came from a play spirit of imitation. Again I was blind and stupid.

When a dancing teacher told me that her deaf pupils kept

better time than those who heard, I considered the statement a bid for patronage.

When visitors, passing through our college chapel, asked "Where is your organ?" I almost laughed in their faces at the ridiculousness of the question, usually followed by its twin query: "Do you use raised letters?" which, by the way, may yet be found valuable in securing touch rhythmical vibrations.

When Dr. Bell advocated, for purposes of analysis, allowing a deaf child to continue, for a while, a habit of making in his throat a favorite sound, with regular intervals between the moaning grunts, I felt that the Humane Society should be called in to save the teacher from death by nervous prostration. In short, I confess to having spent a large part of my school-ma'am life in resenting and suppressing natural rhythmic tendencies of my deaf pupils—tapping with pencils, swaying, rocking, drumming with feet or hands, successive bumpings against walls, etc. Other experienced teachers with whom I have talked admit a similar attitude. We were all blind and stupid together, perhaps.

In an admirable sketch of the late Convention at Delavan, Mr. F. K. Noyes, editor of the *Volta Review*, says that the salient feature of that meeting was "tolerant good-humor which carried with it all its implications of harmony, mutual understanding, good will, and peace."

Now, while the dove of peace continues to hover over our respective camps, why can we not, regardless of preferred system, all unite in a serious study of his subject of Musical Vibratory Massage for the Deaf? In a universe made of *waves*, sooner or later the deaf will surely enter into conscious relationship with the ruling cosmic force, rhythmic motion. Why should not we

American teachers of the deaf seek to leave behind us records showing that

> "We were the first that ever burst
> Into that silent sea?"

No easy task is set us here. Hard study, much of it in a little-trodden field—the psychology of deafness and the still more mysterious realm, brain transformation of vibratory sensations into consciousness; gradual accumulation of tons of data, much of it, inevitably, after laborious sifting, to be thrown out as chaff; securing in our study the aid and interest of trained experts whose knowledge and skill are not easily procured for side lines like this; keeping ever in mind the question of future genuine practical benefit to the deaf from our best results; difficulties and obstacles almost without end, from lack of funds to lack of brains, or *vice versa* perhaps, since in these days of pure "business administration" funds seem to count for considerably more than brains in general education ruled by politics. But our profession, still cherishing the memory of its scholarly founders and its earlier teachers, has nobler traditions. We cannot quite believe that the day will ever come when any of the heads of schools for the deaf will really believe that their ability to screw expenses down to the lowest possible point is of more importance than their attitude toward furnishing to their charges thought power —the bread of life.

Metaphorically, according to many of the speeches made at Delavan and elsewhere recently, the profession has hung out this sign:

WANTED IMMEDIATELY!

Energetic, well-educated young men of good character and ability, to teach the deaf.

Also, from the aforesaid speeches it appears that male applicants are not, as yet, exactly flocking in front of the sign. Some manly young men who have been approached admit, frankly, that they do not find the prospect of life passed within the narrow bounds of a boarding school enticing. The majority, of course, shrug their shoulders and say "No money in it,"—a depressing truth which the comparatively wretchedly-paid women and deaf teachers found out long ago.

Nevertheless, the colleges are each year turning out a few really able young men who would submit to the pettiness of institution life, probably, and forego pecuniary advantage, if they could become scientifically and psychologically interested in the more vital problems connected with the instruction of the deaf. To ignore the fact that many such problems exist, and to insist that attention shall be paid only to the little external points of class management, would be indeed reactionary—nothing less than scholasticism trying, uselessly, to fight the twentieth century. Already articulation and the higher education of the deaf, as at Gallaudet College, have won some such young men, who are doing much to put our profession again on a scholarly and scientific basis. The following letter, coming from a university of high standing, is a significant straw showing which way the pedagogical wind is blowing :

UNIVERSITY OF KANSAS,
LAWRENCE, NOVEMBER 28, 1911.

C. E. WHITE, SUPT., OLATHE, KANS.

DEAR SIR :—In planning the summer session for next year at the University there is under consideration the introduction of a course in abnormal psychology. It has occurred that there might be among the employees of your institution those who would like to avail themselves of this opportunity

to prepare themselves further for their professional duties. If this course can be made useful to those who have official responsibility in connection with the care of the unfortunate classes, and inmates of State hospitals, it would seem to be the duty of the State University to provide for it.

I should be very glad to have your opinion as to whether there would be any considerable demand for such a course, and any suggestions that might occur to you regarding its character and adaptation to the work in which you are inerested.

Respectfully,

OLIN TEMPLIN,

Dean, College of Liberal Arts and Sciences.

In a valuable letter too long to print here, Mr. White, head of the Kansas School for the Deaf, gives approval to the plan and makes the sensible suggestion that a person familiar with the needs of the deaf be put in charge of the department.

A very small beginning along the suggested line is being made by the present Normal Class at Gallaudet College, Washington, D. C., in a study of the potential effects of rhythmic musical vibrations upon the deaf. At the outset, however, admission must be made frankly that this particular Normal Class is unusually well qualified to engage in serious research work, consisting, as it does, of three young men intimately familiar with the most modern psychological thought (some of them read, for pure enjoyment, Kant, Schopenhauer, and Bergson in the original German and French) and two young ladies who, although their studies have been more along other lines, are equally enthusiastic in investigating this new subject of the potential value for the deaf of musical vibrations. Nominally, the writer of this article is the teacher. Often, however, she is a reversed Gamaliel sitting at the feet of her students.

Of course we are floundering a good deal at present. People

have to flounder before they can swim. But every now and then, when we find the water too deep, the Captain, Mr. Enoch Henry Currier, throws us out a life-line that saves our self-respect and helps us amazingly to keep on trying.

With the greatest diffidence I reproduce here a fragmentary schedule of our, as yet, very fragmentary work—asking the reader, while, perhaps, he is smiling at our crudities, to bear in mind that all we are trying to do just now is to form a sort of nucleus for a rhythmic, circular movement of co-operation that may in time include all the schools for the deaf in the United States—which sounds rather absurdly ambitious, I fear. But, after all, molecules or atoms, or electrodes, or whatever name one may choose to give to primary insignificances, must come together before anything in this world can become a solidarity. Up to date, our procedure has been something as follows:

Class consideration of Mr. Currier's work at Fanwood, including analytic study of charts, some of which are here reproduced; explanation of Miss Porter's notes made during her recent visits to the New York school; testimony and examination of semi-deaf students of Gallaudet college as to their sensation of musical vibrations; experiments on younger pupils; much reading of first-rank physicists and psychologists of *sound*, followed by written exercises tracing, as far as possible, the probable relation of the deaf to sound vibrations in regard to the four fundamentals—duration, intensity, pitch, and tone color. One member of the class, Mr. Victor Skyberg, of St. Olaf College, Minnesota, is, luckily, a musician and member of a band. Mr. Skyberg is making interesting research into the possible transmission and recognition of *personality* by means of rhythmic musical vibrations.

Much attention has been paid to the study of rhythm. Under this head Sidney Lanier's classic book, "The Science of Poetry and Music," was read thoroughly. Many other authors on rhythm have also been consulted. What education in rhythm may mean for the appreciation of poetry the teachers of advanced classes in our schools will readily understand, for, as Miss Katharine Fletcher, many years in charge of the High Class at the Northampton School, writes:

"Poetry presents herself to us as educators with a two-fold claim: first, that her influence is as potent as that of religion itself in refining and elevating the human mind and heart, and, second, that she brings to her lovers one of the purest and most abiding pleasures which life has to offer—and this claim is amply supported by the intellectual history of the world."

There would seem to be no reason why this new movement should not in time bring to the deaf reader of poetry at least such a share of rhythmic appreciation as greatly to enhance his enjoyment.

A few of the many immediately practical class directions have been:

Give six suggestions for exercise in eye rhythm suitable for a class of deaf children in their third school year.

How would you make use of musical vibrations in securing good voices from deaf pupils?

Give a word picture of a semi-deaf child dropped suddenly from a hearing environment into an institution for the deaf. What effect, emotionally and mentally, do you think daily instruction in music might have on that child?

In your next period of play supervision note and jot down on paper different unconscious rhythmical actions by different children, with special comment upon temperamental signs thus shown.

Make a numbered list of all the different kinds of rhythm you can think of, under headings like "cosmic rhythms," "nature rhythms," "human bodily rhythms," "bird rhythms," "insect rhythms," "mental rhythms," etc., etc.

Under deeper topics, given out usually as somewhat lengthy propositions, exercises similar to those quoted below have been written in the class room.

After speaking at some length of the rhythm in the dances and cries of savages following a leader, Mr. Skyberg writes:

With the deaf music must also be largely rhythmic and, as they are unable to perceive auditory rhythm, the rhythm must be that of motion. The rhythm of motion may be the rhythmic movement of other bodies and is in that form perceived by the eye, or it may be the rhythmic movement of one's body; there is also a perception of rhythm through rhythmic vibrations that strike the body. Those vibrations are sound-waves set up by some vibrating body. Now when a musical instrument is played upon it responds in vibrations, which by the hearing person are perceived in auditory images. These vibrations are also perceived by the deaf, but in tactual, not auditory, images.

Why not develop the deaf child's faculty for perceiving rhythmical musical vibrations? They give him pleasure. At first he will feel only different degrees of intensity of vibrations. It is doubtful whether, in the sense of the terms as used by the hearing, the totally deaf child can learn to distinguish pitch or tone, and discord from harmony. The instruction must be technical and mechanical at first, with much drilling in the proper execution of the piece taught. But after a deaf child has learned to read music and to play in

exact time and play the right notes he might be able gradually to understand the music more as we hearing people do—to *feel* it. A piece of music is an expression of the feeling of a composer. The good player will feel and express the same emotions which inspired the composer, just as the good actor loses himself in the personality of the character he represents on the stage. It is only the player who adds to the mechanical execution of a piece of music that indescribable something which we call *personality*, who can hold an audience with even the simplest of melodies. The music stirs his audience as he is stirred while playing. If the player feels no emotion himself, the audience remains cold. I have played with a band for several years and I know, positively, that the personality of the band director is the main factor in making a band work successfully.

One summer while the band was touring Europe the director was accosted by two deaf young Norwegian men. They told him that they could not hear the band play but that they could feel it pleasurably. The director became interested to find out what their feeling really was. They told him that they felt the vibrations but that they *also felt something else; their emotions were stirred.* "*We saw your face and we felt just as you did,*" they said to him. In this case the facial expression of the director may have influenced their emotions somewhat, but the fact still remains that the emotions embodied in the music did find some response in the emotional self of each of these two deaf young men. The vibrations were the key to the emotions apparently. The pupils of the New York Institution say that slow music makes them sad, and quick music makes them feel joyful. Probably rhythm acts here.

If in the future we can find out how to give to deaf pupils musical vibrations that shall enable the emotions to be touched, we shall bestow upon them a most valuable gift.

Mr. Skyberg might have made mention also of the reported recognition by Helen Keller, through musical vibrations, of a tune she had heard only in her infancy before she became deaf.

Mr. E. W. Iles, of the University of Kansas, writes:

For the wholly and congenitally deaf to comprehend sound, in the sense in which the hearing understand it, must be an utter impossibility. In-

stead, such deaf persons would understand what we call sound as a vibration, but colored (so to speak) by the organs through which the vibrations were received. In one case it may be known as a kind or phase of light; again it might be tactually, or even both ways.

It is known that the vibrations in matter may be presented to us in many different ways; light, touch, sound, and perhaps electricity, magnetism, and the peculiar force of radium and similar kindred substances may be phenomena of vibrations which come to us in different forms. Supposing these phenomena to be merely different aspects of the same thing, because coming to our knowledge through the avenues of the different senses, why should we not, by studying the *relations between the different perceptions*, make up in a great degree for the lack of a certain class of perceptions—*e. g.*, the auditory perceptions in the case of the deaf?

Adopting another pretty generally accepted theory of biology, viz: that the animal organism, through a process of evolution, adapts itself to the conditions of nature surrounding it so as better to maintain itself and secure its existence, it would be said that the ear, as an auditory organ, had been gradually evolved by species developed under the influence, and because of, the stimulus in surrounding nature of that class of vibrations now known to us as sound. All animal life has not responded to sound vibration and acquired an auditory sense. Lower animal life has no sense of hearing at all, whereas, from the lowest to the most advanced species there is a corresponding rise in the scale of the ability to hear. Some forms of life, *e. g.*, the birds, can distinguish only higher tones, while the elephant can distinguish only the lower. The range of neither corresponds with that of man; his being intermediate and, probably, more lengthy.

Granting that the sense of hearing has been acquired under the stimuli of sound vibrations, would it not seem possible for the deaf to regain, at least partially, this faculty (in case none of the auditory apparatus had been destroyed), if by means of muscial vibrations (which are probably most potent) this perhaps dormant or latent faculty could be *stimulated* into activity? Regardless of such hypotheses as the above, we may already safely say that musical vibrations, as perceived by the deaf tactually, carry with them an effect analogous to that on the hearing. The chief cause of this effect is doubtless due to the rhythm running through the train of

vibrations, dividing and grouping definite numbers of vibrations into measures. This measured rhythm is, in music, called the "time." With the deaf the most apparent feature of music is the time, for the harmony of it is only accessible through rhythm.

From this point Mr. Iles enters at length into the subject of of musical rhythm and its connection with the deaf. He suggests that "the most serviceable data would probably take the form of a comparative table, using as the basis of experiments the effect of different kinds of time upon different deaf individuals under some such headings as follow: Degree of sound perception; Name; Age; Length of musical training; Kind of time best liked; Kind of time most disliked; Emotional effect of 2-4 time, 3-4 time, 4-4 time, 6-8 time; Which time is found easiest of execution; Which most difficult of execution; Manner of keeping time (tapping of foot, etc)."

Mr. Harry Vigour, of Baker University, Kansas, writes well on the probable benefits to the deaf of applied rhythm. Miss Beatrice Minhinnette, of Shorter College, Georgia, has made a sympathetic study of the semi-deaf child and his relation to music, applied educationally, while Miss Edith Long of Iowa, whose parents are deaf and who has many friendships among the deaf, has given a valuable account of cases she has known to be affected by music.

Again it must be insisted that, as yet, we are only groping, as far as the psychological side of the matter is concerned. We have not much expert testimony in print from the psychologists. They have used the deaf illustratively to prove their own points, but none of them (with the partial exception of William James, whose wide sympathies kept him from ever approaching any human being impersonally) has yet studied the deaf with the

main purpose of *benefiting the deaf*. That is what we want to do, just as far as our zeal and our abilities will permit us to be of real service to them and to their class future.

This class-room work has been most informal—like a *seminar* or, possibly, in its utter lack of conventionality, more like a smoker—without the accompaniment of nicotine, I hasten to add. Lunch and a cup of tea, though, have brightened up our wits occasionally when the mists were too thick to penetrate. The whole subject is baffling enough at some points, Heaven knows. Each of us is saving up a list of questions to be asked of the "eminent experimental psychologist" (not yet captured, by the way), who is to lecture to us on some of the more difficult phases of our study. At each step our interest increases and that, in a world decidedly too full of things that make living a bore, is worth much.

All the members of the class and the teacher—so-called—of psychology have pledged themselves to continue their researches into the effect on the deaf of musical vibrations and to collect, analyze, and preserve, as much data thereon as possible. If any readers of the *Annals* should feel like joining us we should be greatly pleased and honored to welcome them into our embryo Society. Any written data bearing on the subject will be gratefully received, and may be addressed to Sarah Harvey Porter, Kendall Green, Washington, D. C. Whether oralists, combinists, manualists, or what not, surely we can all meet, beneficially to our pupils, on this neutral ground, taking for our motto in this potentially important search into the hidden mysteries and effects of brain transmutations, the dying words of one of the greatest of the earlier seekers in the same field—the last earthly expression of the life desire of Johann Wolfgang von Goethe: "Light, more Light."


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